NREPP SAMHSA's National Registry of Evidence-based Programs and Practices

Learning Center Literature Summary
Sustainability for Evidence-Based Programs

Overview

Evidence-Based Programs (EBPs) are programs, interventions, or treatments grounded in research, practice, and controlled settings that demonstrate effectiveness in addressing a particular clinical or behavioral health need (George et al., 2008). EBPs grew out of the success of particular behavioral health interventions as models for disseminating effective treatment strategies (George et al., 2008). Given the amount of research and resources dedicated to developing and disseminating EBPs, how and to what extent they are sustainable is the focus of a large amount of literature.

Researchers have put forward a number of conceptual frameworks for understanding the determinants of and processes that contribute to the sustainability of EBPs. This literature review summarizes the seminal contributions of that literature. First, we review the definitions that have been used to explain sustainability and provide a brief history of sustainability of EBPs. Second, we provide an overview of the practical determinants that can be used before and during the life cycle of an EBP to promote sustainability. Third, we examine the models and conceptual frameworks used to understand sustainability. Fourth, we provide a brief discussion of how to assess sustainability. Finally, we close with an overview of next steps for the field of sustainability research.

Defining Sustainability for EBPs

Sustainability is a broad term and its meaning can vary by field of study. Even within the field of the sustainability of EBPs, definitions can vary. Discussions of sustainability in EBPs can focus on the sustainability of a particular program, the sustainability of an approach within a broader organization or system, or the sustainability of behavioral health outcomes for clients.

In addition, this field of research has also examined the extent to which EBPs have long-term sustainability, even after external funding sources end (Rabin et al., 2008; Johnson et al., 2017). For EBPs that are focused on behavioral changes and changes to population health, sustainability efforts must account for the fact that EBPs may need to be in place for several years before outcomes or impacts can be achieved (Steckler and Goodman, 1989; Roussos and Fawcett, 2000). For the purposes of this review, we are concerned

with EBP sustainability defined as the continued use of durable program components and activities by organizations over time to achieve desired health and program outcomes (Scheirer, 1994; Scheirer and Dearing, 2011; Pluye et al., 2004a; Welsh et al., 2016).

The Role and History of EBP Sustainability

Two of the primary frames used by researchers to conceptualize EBP sustainability are the *stage models frame* and the *concomitancy frame*. Stage models are used to conceptualize when and how sustainability occurs in the life cycle of a program (Scheirer, 2005). These models conceptualize sustainability as a distinctive step in a larger process, following phases such as exploration, development and adoption, and implementation (Aarons et al., 2010). In contrast, the concomitancy frame views sustainability planning and practices as occurring throughout the lifecycle of an EBP (Pluye et al., 2004b). For example, Pluye et al. (2004b) argued that sustainability planning must be a fundamental component of the exploration and implementation phases, as well as a continuous part of program development (Pluye et al., 2004b; Greenhalgh et al., 2012). From the concomitancy frame, sustainability activities and implementation activities must be occurring in complement to each other and through organizational routines (i.e., routinization) (Pluye et al., 2004b). This research aligns with the practicality of administering EBPs to demonstrate that stage models of implementation have become less popular given the fluid nature of these processes (Greenhalgh et al., 2012). Evidence of both the *stage model frame* and the *concomitancy frame* will be evident in the literature covered in this review.

A great deal of time, energy, and resources go into developing and implementing EBPs. While there are certainly times when EBP de-adoption is necessary (Bell & Taylor, 2011; Goodman & Steckler, 1987/88; Helfrich, n.d.; Massatti et al., 2008; Niven et al., 2015; Prasad & Ioannidis, 2014), there are also reasons that program failure (i.e., a program not being sustained) could be detrimental to stakeholders or future efforts. First, when a program is not sustained and the health issues it was meant to address are still present (Holland et al., 1993), without a replacement EBP, clients may be left without a treatment option (Shediac-Rizkallah & Bone, 1988). Second, not sustaining a program is also a waste of the resources that were invested in implementing the program, especially if the program could have been successful with appropriate modifications or more time (Shediac-Rizkallah & Bone, 1988). Finally, when a program is not sustained, the community may find it difficult to trust the organization as well as future interventions (Goodman & Steckler, 1987/88). Given these factors, it is important for organizations to better understand models of and determinants of sustainability when implementing and maintaining an EBP.

Practical Determinants of EBP Sustainability

There are a number of factors to account for in ensuring the sustainability of an EBP. These determinants tend to fall within three layered categories of context: the broader community, the organizational setting, and the program design (Shediac-Rizkallah & Bone, 1998; Lean et al., 2015). In this section, we provide a review of other seminal literature on the practical determinants of sustainability, organized into three layered categories: community, organization, and program. In some instances, determinants transcend more than one layer.

Community

Broadly speaking, the community context in which an EBP exists requires certain characteristics for increasing the likelihood of sustainability. First, the context of the community should drive which EBP is chosen for implementation. An EBP must be chosen based on how appropriately it fits within the community context (Klingner et al., 2013; Fleiszer et al., 2015). Planning also requires acknowledging and accounting for outer contextual factors that may hinder EBP success, such as socio-economic and political conditions, as well as the level of community and key stakeholder support for the EBP (Fleiszer et al., 2015; Scheirer, 2005). In addition, planners should utilize time prior to the EBP commencing to assess the target population's knowledge and adapt program materials respectively (Jacobs et al., 2014).

After the program commences, additional efforts in the broader context will be needed to ensure sustainability. Jones et al. (2014) found that according to state mental health leaders, in order to sustain an EBP, additional trainings and consultations were needed to ensure fidelity and effectiveness (Jones et al., 2014). Programs also require continual long-term support from and linkages with community stakeholders and organizations to ensure sustainability and system capacity (Leadbeater et al., 2015; Johnson et al. 2004).

Organization

Determinants of sustainability also cluster in the context of the organization or system that is hosting the EBP. Research also demonstrates the importance of the program fitting within the goals, mission, and culture of the overarching organization to ensure sustainability (Scheirer, 2005; Fleiszer et al., 2015; Raffel et al., 2013). This increases the likelihood of support from staff (Scheirer, 2005). It is important that staff view the new program as needed (Rohde et al., 2015) and that it is made a priority among those who will be its implementers (Klingner et al., 2013) and among senior leadership (Lean et al., 2015).

The overarching organization must discern whether a new program could lead to burnout among staff and subsequently result in high staff turnover (Raffel et al., 2013). This also means ensuring that the program can be easily integrated into the values, culture, and infrastructure of the overarching organization (Curry et al., 2016; Fleiszer et

al., 2015; Raffel et al., 2013). First, the overarching organization must be able to successfully support the long-term sustainability of the EBP from a financial and infrastructure perspective (Raffel et al., 2013).

Program

The program layer of the determinants of sustainability refers to the components and functions of an EBP. As mentioned earlier, before implementation an assessment of community needs is required in order to choose an EBP that would effectively address those needs (George et al., 2008). Second, the chosen EBP should have a record of evidence for its quality and effectiveness in achieving the desired goals with the target population (Johnson et al., 2004). However, as stated above, it is important to ensure that the program is adapted to the context of the community and target population while also ensuring that the core components and activities that lead to effectiveness are still preserved (Scheirer, 2005). The remainder of the practical determinants of sustainability at the program level are divided into six subsections: leadership, staff, clients, routinization, financing, and monitoring and evaluation.

Leadership. Several studies emphasize the importance of an EBP having an individual in a leadership role who is tasked with championing the program through its life cycle (Scheirer, 2005; Leadbeater et al., 2015; Johnson et al., 2004). These leaders or champions focus on marketing the program to build relationships and develop sustainable funding sources (Savaya et al., 2008). This leadership is also important for prioritizing the new program and helping to fully integrate it into the host organization (Savaya et al., 2008). The designing, branding, and marketing of an EBP is critical in demonstrating the need for the program to staff and clients and in obtaining new sources of funding (Scheirer, 2005).

Staff. The workforce of the program and their respective skills also play important roles in increasing the sustainability of the program (Stirman et al., 2012; Bond et al., 2004). Raffel et al. (2013) found that if training was affordable and accessible within their schedules, helping staff obtain new skills was important for ensuring sustainability. Supporting and promoting expertise development among staff was an important part of building and sustaining the system's capacity (Johnson et al., 2004). Lean et al. (2015) argue that staff skills and expertise should be prioritized and reinforced to ensure sustainability. However, Jacobs et al. (2014) found that heterogeneity of staff expertise can be helpful in sustaining programs, allowing for the development of networking and support between staff members.

Client. The literature also discusses the determinants of sustainability that relate to current and future client characteristics, buy-in, and feedback. First, EBPs should be adapted to the context. In particular, during planning, EBP materials should be adapted to the characteristics of the target population (Jacobs et al., 2014). Second, feedback and

evaluations from clients should be used to improve the EBP (McDonald et. al., 2013). This should occur both during the planning phase and throughout the life-cycle of the EBP via evaluation and feedback.

Routinization/Institutionalization. Before and during the implementation of a new program, efforts should be made to routinize or institutionalize the program components into organizational systems (Scheirer, 2005; Pluye et al., 2004; Bond et al., 2004; Johnson et al., 2004). Scheirer (2005) recommends routinizing the core functions of a new program into the existing organization in order to ensure sustainability. This includes having integrated standard operating procedures (e.g., trainings, guides, etc.) and policies (Curry et al., 2016; Johnson et al., 2004). These findings transcend much of the sustainability literature. For example, Stirman et al. (2012) conducted a review of 125 studies on sustainability and found that among other determinants, program and organizational processes to ensure institutionalization and program improvement (Stirman et al., 2012) were related to the likelihood of sustainability.

Financing. The financial solvency of a program is a commonly cited determinant of EBP sustainability (Fleiszer et al., 2015; Curry et al., 2016; Stirman et al., 2012). Bond et al. (2004) examined 49 sites six years after the initial implementation of EBPs that were part of a National Implementing Evidence-Based Practices Project. According to agency leaders who were interviewed, financial barriers, as well as a lack of prioritization, were more commonly cited as barriers to long-term sustainability among discontinuing programs than among sustained programs (Bond et al., 2004). The infrastructure needed to ensure the sustainability of an EBP requires continuity of funding (George et al., 2008) so that appropriate human capital, technology, and other resources necessary to maintain system capacity can be accessed (Johnson et al., 2004). In addition, high quality EBPs often require more funding than traditional methods of intervention (George et al., 2008). Therefore, building a strategic funding plan that is stable and reliable is key (George et al., 2008). The PROSPER project, which provided technical capacity-building assistance to community-based organizations, found that the groups that relied on developing long-term partnerships to secure funding were more successful than those groups that focused more heavily on diversifying funding sources (Welsh et al., 2016).

Monitoring and Evaluation. Finally, developing and maintaining sustainable EBPs also requires evaluation using fidelity monitoring, as well as appropriate and practical outcome measures (George et al., 2008; Raffel et al., 2013). Informal evaluation can also be helpful in offering regular opportunities for staff to share their perceptions of the program's fit and effectiveness, as well as their commitment to the program (Leadbeater et al., 2015). Research on school-based behavioral interventions also found that sharing data with organization staff was associated with increased likelihood of sustainability (McIntosh et al., 2015). Formal and informal data can be used to adapt and improve an

EBP to ensure it properly fits the context and client needs, while also ensuring efficacy (Klingner et al., 2013). This modifiability factor is important for ensuring sustainability through contextual changes (Scheirer, 2005).

Conceptual Frameworks for EBP Sustainability

The previous section reviewed community-, organization-, and program-level determinants of sustainability. Numerous scholars have put forward frameworks to conceptualize EBP sustainability and the interconnections between these determinants. These frameworks rely on new research or the review of existing research to visually represent how the key components or determinants are linked to measures of successful sustainability. Such frameworks can then be used to inform decision making, assist with goal setting and program planning, and guide future research of EBPs for behavioral health. Having already provided a review of the determinants of sustainability above, we now review key frameworks for EBP sustainability to show how such determinants have been linked and conceptualized within broader frameworks of the literature.

In most of the frameworks that follow, sustainability is the primary focus. In the final frameworks, sustainability is embedded within broader implementation frameworks. The literature supports the interconnectedness of sustainability activities with implementation activities (Pluye et al., 2004b). Therefore, this embedded nature of the final frameworks is logical and appropriate for inclusion.

Conceptual Framework for Sustainability of Public Health Programs

The Conceptual Framework for Sustainability of Public Health Programs put forward by Scheirer and Dearing (2011) identifies three layers of factors affecting sustainability: 1) characteristics of the intervention, 2) characteristics of the organization, and 3) characteristics of the environment. The *characteristics of the intervention* refers to the adaptability of the program components and activities and whether the program is supported by empirical evidence (Scheirer and Dearing, 2011). *Characteristics of the organization* include whether the program fits well into the goals of the organization, whether there is capacity and support for the new program within the organization, and whether there is buy-in from staff and clients (Scheirer and Dearing, 2011). *Characteristics of the environment* include partnerships with other area organizations and the extent to which funding and other resources are available (Scheirer and Dearing, 2011).

The conceptual framework for sustainability below shows the relationship between these three layers of characteristics and how they transcend other components of the EBP, including inputs, obtained financial resources, and outcomes. The outcomes box of the framework represents the dependent variables that can be used to conceptualize sustainability outcomes. These include whether 1) health outcomes are sustained for clients, 2) the program activities are sustained, 3) community partnerships are

maintained, 4) organizational changes made during program implementation are continued, 5) the problem that the program seeks to address remains the core focus, and 6) the program spreads to serve a larger audience. Note, access to financial resources mediates the relationship between those independent variables and the program outcomes (i.e., dependent variables) (Scheirer and Dearing 2011). These linkages and processes of sustainability, Scheirer and Dearing (2011) argue, are implicitly affected by the social, policy and financial environments around an intervention.

The Capacity for Sustainability Framework

The Capacity for Sustainability Framework developed by Schell et al. (2013) was designed to help administrators of public health programs strategically plan for sustainability. The framework consists of nine domains that represent the conditions necessary for sustainability. This framework was built through a two-part process. First, the authors conducted a meta-analysis of 85 peer-reviewed journal articles on sustainability within public health programs (Schell et al., 2013). Second, the authors conducted concept-mapping with researchers/scientists, funders/advisors, and state/local practitioners (Schell et al., 2013). From the concept-mapping process, the sustainability model framework was developed (Schell et al., 2013). Eighty-nine percent of the core domains in the final framework were supported by the literature included in the meta-analysis (Schell et al., 2013). This framework implicitly acknowledges three layers of characteristics in determining capacity for sustainability: program, organizational, and the broader service system (Schell et al., 2013). The authors argue that strategic planning within each of the nine domains that spans these three layers is essential for sustainability capacity (Schell et al., 2013).

The Capacity for Sustainability Framework as portrayed below consists of nine domains. In the center is strategic planning. Organized around strategic planning are the eight other domains: strategic communications, continued program evaluation, adaptation to sustain the program through contextual changes, organizational capacity to maintain activities, partnerships that connect the program to the community and other stakeholders, political support, funding stability, and positive public health impacts (Schell et al., 2013). Domains that are strongly related are positioned next to each other (Schell et al., 2013). In addition, the last four domains listed (representing the upper and right portions of the framework) are external in nature, whereas the first four domains listed (representing the bottom and left portions of the framework) are internal in nature (Schell et al., 2013).

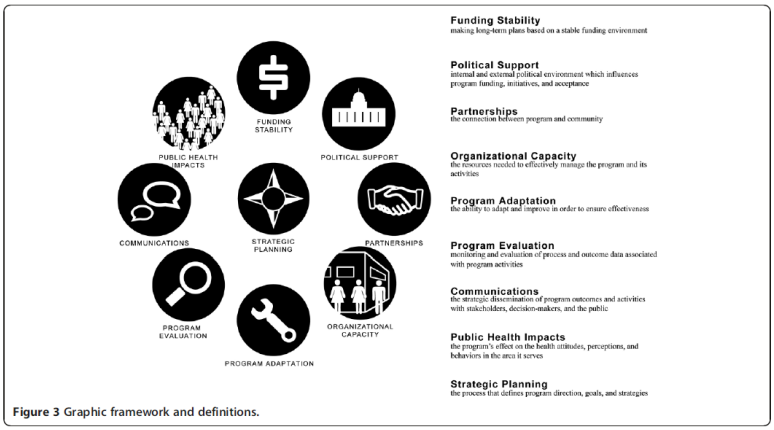


Figure 3 Graphic framework and definitions.

The Dynamic Sustainability Framework

The Dynamic Sustainability Framework was developed by Chambers et al. (2013) and is grounded in research that sustainability is a process that institutionalizes a program into its broader organization and environment, all the while being subject to constant change. This framework seeks to promote implementation and sustainability while simultaneously improving the program. The advantage of this framework is its acknowledgement that change will likely occur within the program, the organization, the system, and the broader setting.

As seen in the figure below, there are three primary spheres in this framework: the intervention, the practice setting in which it is delivered, and the broader system in which it is situated (Chambers et al., 2013). Within the intervention sphere are components that influence achievement of program goals. The intervention sphere is then nested within the practice setting sphere (Chambers et al., 2013). Within the practice sphere are also a list of components that influence achievement of program goals (Chambers et al., 2013). Finally, the practice sphere is nested within the third sphere that represents the ecological system (Chambers et al., 2013). Listed within this sphere are the ecological components that influence achievement of program goals (Chambers et al., 2013). Each of these three primary spheres is then surrounded by rippled spheres that represent where the fluidity and likelihood for change within each of these spheres is located (Chambers et al., 2013).

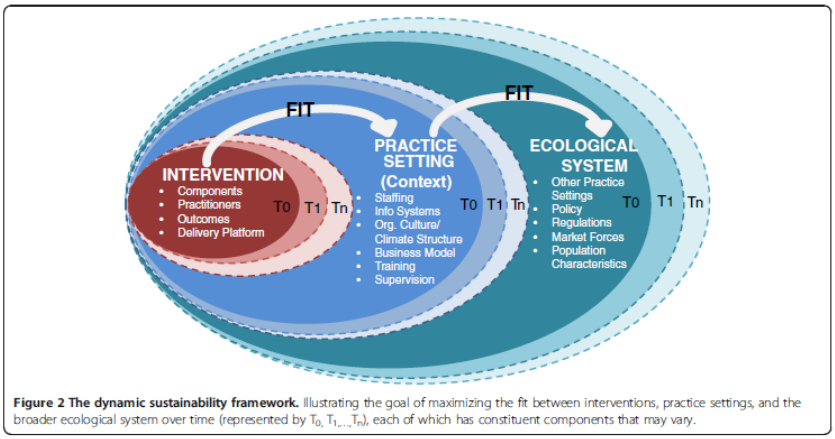


Figure 2 The dynamic sustainability framework. Illustrating the goal of maximizing the fit between interventions, practice settings, and the broader ecological system over time (represented by $T_0, T_1, \ldots T_n$), each of which has constituent components that may vary.

The authors argue that it is through change during the processes of implementation and sustainability that the program will be optimized (Chambers et al., 2013). It is through the processes of implementation and sustainability supported with appropriate and relevant evaluation and feedback that the program then adapts to fit the setting (Chambers et al., 2013). If the program 'fits' the setting, its chances of sustainability are high (Chambers et al., 2013). The authors argue that this framework has both program and policy relevance. In particular, it provides a useful approach to "patient-centered medical homes, accountable care organizations, and pay for performance demonstrations, and support for local demonstration projects" (Chambers et al., 2013, p. 8).

Dynamic Model of Health Program Sustainability

The Dynamic Model of Health Program Sustainability is a framework that emerged out of data collection and analysis of complex changes to the primary and secondary care of stroke, kidney, and sexual health patients in London (Greenhalgh et al., 2012). The framework draws on intervention-focused and system-dynamic perspectives (Greenhalgh et al., 2012) and is adapted from the frameworks of others (e.g., Ovretveit, 2011; Scheirer and Dearing, 2011; Bisset and Potvin, 2007; Gruen et al., 2008) to provide a framework to better conceptualize how health systems can sustain original programs during periods of change. Such sustainment during systems changes was dependent on "(1) stakeholders' conflicting and changing interpretation of the targeted health need; (2) changes in how the quality cycle was implemented and monitored; and (3) conflicts in stakeholders' values and what each stood to gain or lose" (Greenhalgh et al., 2012, p. 517). The authors argue that this framework could be useful to other health care administrators who are planning to implement a complex change and who must balance continuing past practices and adapting to changing contexts (Greenhalgh et al., 2012).

The figure below presents the components that should be considered when balancing sustainability of existing programs and complex system change. The three hexagons

represent intervention-focused domains. These include: "(1) What are the main health concerns in the target population? (2) What are the components of the program (e.g., service models) and the infrastructure supporting these components (e.g., information systems, monitoring metrics)? and (3) What positive forces (e.g., good managerial relations) are driving the program forward, and what negative ones (e.g., competition for limited resources) are holding it back?" (Greenhalgh et al., 2012, p. 521). The curved arrows in the model represent three dynamic components of sustainability: 1) "changes in definitions and interpretations of health concerns over time," 2) "changes in how the program is delivered and monitored over time," and "changes in how stakeholders engage with the program and nature/extent of local political struggles" (Greenhalgh et al., 2012, p. 521).

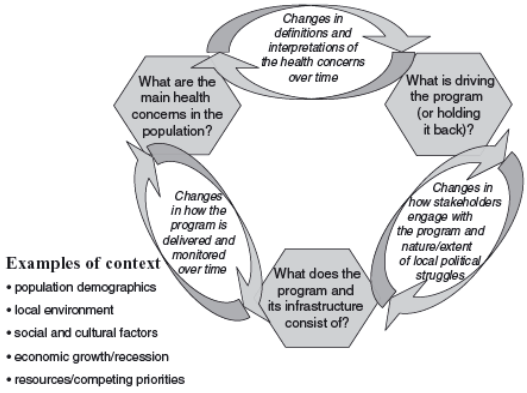


FIGURE 1. Dynamic model of health program sustainability.

Conceptual Model of Implementation Phases and Factors Affecting Implementation in Public Service Sectors

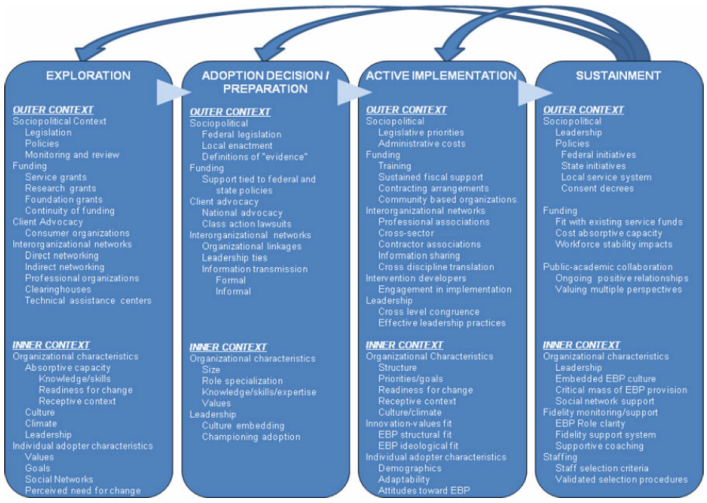
The Conceptual Model of Implementation Phases and Factors Affecting Implementation in Public Service Sectors are both designed for understanding which factors explain public service sector agencies' adoption of EBP interventions during the implementation of a program and for identifying the determinants of sustainability (Aarons et al., 2010). In contrast to the previous frameworks, these frameworks explicitly embed sustainability determinants within the broader implementation framework. It is important to note that the first model is not focused specifically on sustainability, but rather on the factors that lead to adoption of EBPs, including those factors that exist during the sustainability phase of a program. It is also important to note that these models rely on a stage approach to understanding implementation and sustainability. Rather than viewing sustainability as an embedded component during the entire lifecycle of an organization, Aarons et al. (2010) conceptualize sustainability to be an end-phase—one that is pursued after three a priori stages: exploration, adoption/preparation, implementation, and sustainment.

The Conceptual Model of Global Factors Affecting Implementation in Public Service Sectors presents the interconnected outer context and inner context factors that

contribute to whether public service sector agencies adopt EBP interventions (Aarons et al., 2010). These models are designed for settings that target children and families and mental health services (Aarons et al., 2010).

Aarons et al. (2010) also provide a conceptual model for categorizing the factors that determine successful EBP implementation into four phases: Exploration, Adoption/Preparation, Implementation, and Sustainment. Different outer and inner context factors will require different levels of priority during different stages of implementation. For the purposes of this literature review, we focus on the fourth phase: sustainment. During the sustainment phase of an EBPs life cycle, outer context variables that contribute to EBP success include 1) strong leadership at the government and system levels to ensure multi-dimensional support for the program, 2) multi-level policies to support the program's sustainment and institutionalization, 3) funding, and 4) public-academic collaborations that serve to help translate clinical research into clinical practice (Aarons et al., 2010). The inner context variables that contribute to EBP success include: 1) organizational characteristics, including leadership to help embed the EBP within the existing organization culture and staff who implement the EBP consistently and well, 2) fidelity monitoring/support to promote quality improvement, and 3) adopting high-validity hiring practices to ensure staff are appropriately skilled for their positions (Aarons et al., 2010).

Conceptual model of implementation phases and factors affecting implementation in public service sectors:



Assessing Sustainability

The extent to which an EBP is sustainable is also an important field of study that has particular relevance for existing programs. Sustainability assessment relies on data from monitoring and evaluation tools. As mentioned earlier, ongoing monitoring and

evaluation are essential tools for assessing a program's activities to continuously adapt and improve the program to ensure it properly fits the context and client needs while also ensuring efficacy (Klingner et al., 2013). This assessment paired with program improvement is best exemplified by the Dynamic Sustainability Model discussed earlier where the assessment of sustainability is not a static moment, but always occurring within changing contexts. It is through continuous evaluation and feedback that the program adapts to fit the setting and thus increases chances of sustainability (Chambers et al., 2013). In the remainder of this section we provide an overview of a few of the different approaches to assessing sustainability within EBPs.

First, several scholars have put forward rudimentary classification systems to categorize programs based on the extent to which sustainability exists. For example, Pluye et al. (2004a) developed a system that uses four classification categories: 1) the absence of sustainability, 2) precarious sustainability, 3) weak sustainability, and 4) sustainability, with each being defined based on the extent of program activities and the degree to which those activities are routinized. An alternative approach to categorizing the extent to which a program is sustainable was offered by Shediac-Rizkallah and Bone (1998). They argue that indicators of sustainability should be measured across three categories: 1) whether the health benefits of the program are maintained, 2) whether program components and activities are institutionalized, and 3) the extent to which capacity building is occurring within the target population to shift their involvement from mere receivers of the benefits to owners and "active participants" in the program (Shediac-Rizkallah and Bone, 1998).

Second, scholars such as Luke et al. (2014) have developed more evidence-based assessment tools such as the Program Sustainability Assessment Tool (PSAT). The PSAT, which grew out of the Program Sustainability Framework discussed earlier (Schell et al., 2013), is an instrument used to measure a public health and social service program's capacity to be sustained. It utilizes all of the domains from the Program Sustainability Framework, except for public health impacts. Initial assessments of the tool show good validity and consistency (Luke et al., 2014). The results of the PSAT are meant to be used to evaluate and plan for improved sustainability within the program. While the PSAT is simple and transferrable to other fields (Luke et al. 2014), it is limited in its ability to account for important contextual details.

Third, and finally, a research approach to measuring capacity for sustainability is offered by the Stages of Implementation Completion (SIC), developed by Chamberlain et al. (2011). The SIC is an eight-stage assessment tool for measuring the progress of an evidence-based program through the phases and stages of implementation. Implementation activities can be categorized within the 8 stages, which then fall within 3 phases (pre-implementation, implementation, and sustainability) of the SIC model (Chamberlain et al., 2011). This is meant to be a monitoring and evaluation tool for

implementation. It measures stage duration via "Duration Scores" (i.e., how much time it takes to complete a stage), the share of implementation activities completed via "Proportion Scores," and implementation milestone (Chamberlain et al. (2011).

Future Steps/Directions

The literature on sustainability of EBPs has burgeoned in the past 2 decades. However, there are several ways in which the research can have improved validity and grow into new areas that have yet to be fully explored. This section highlights some of these research prospects identified in articles included in this literature review. First, researchers need to develop better measures of sustainability and determinants of sustainability (Proctor et al., 2015). The way in which sustainability (i.e., the dependent variable) and the factors that influence it are operationalized needs to be improved in order to ensure objectivity and internal validity (Scheirer, 2015; Francis et al., 2016). Moreover, Scheirer (2005) argues that the research on factors associated with sustainability should be grounded in data, rather than in previously developed categories of such factors, so as not to limit a growing conceptualization of such factors. Researchers working in sustainability should provide detailed documentation of their methods to improve the validity of their findings (Scheirer, 2005). Objectivity of the methods and findings can also be improved by using multiple key informants and sources of data for organizations in order to check for convergence (Scheirer, 2005)

Finally, as mentioned earlier, for EBPs that are focused on behavioral changes and changes to population health, sustainability efforts must account for the fact that EBPs may need to be in place for several years before outcomes or impacts can be achieved (Steckler and Goodman, 1989; Roussos and Fawcett, 2000). Sustainability research has more recently examined the extent to which EBPs are sustainable over a long period of time, particularly when external funding sources end (Rabin et al., 2008). Johnson et al. (2017) found that 1) "positive change in coalition capacity," 2) "increases in data resources," and 3) expertise, and 4) "level of coalition formalization" determined the likelihood of evidence-based prevention interventions in substance abuse community coalitions being sustained over the length of the study period (i.e., 5.5 years). Still, more research should focus on the long-term sustainability of EBPs, especially after large funding sources are no longer in place (Johnson et al., 2017). Stirman et al. (2012) recommend choosing a timeframe that is beyond initial implementation, including multiple years of data and looking beyond just the first two years of a program.

Conclusion

EBPs represent programs, interventions, and treatments that have been proven to demonstrate effectiveness in addressing particular behavioral health needs (George et al., 2008). While high-quality EBPs can represent a great deal of opportunity, they typically require more funding and resources to implement and maintain effectively (George et al., 2008). Therefore, sustainability planning should be a fundamental part of

any EBP. This literature review has summarized the seminal contributions of the literature that examines the determinants of and processes that contribute to the sustainability of EBPs.

The sustainability of EBPs is determined by factors and characteristics at multiple levels: the program, the host organization, and the broader community and system (Shediac-Rizkallah & Bone, 1998; Lean et al., 2015). The determinants of sustainability interact across these three levels requiring an approach to sustainability that is multifaceted and integrative. Much of the research also suggests the need to acknowledge and embrace change—that sustainability reflects programmatic flexibility to contextual changes in order to ensure the efficacy and continuation of the core components of the program (Fixsen et al., 2005). In many ways, sustaining an EBP is a continuous process that requires leadership to be patient and acknowledge that tangible outcomes may take years to manifest (Steckler and Goodman, 1989; Roussos and Fawcett, 2000; Rabin et al., 2008; Stirman et al., 2012).

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